

WHAT IS CLAIMED IS:

(1) A method for making an electric circuit board comprising the steps of:

providing a member having a central layer of a first material which is operatively contained between first and second layers of a second material;

placing a layer of a third material upon certain portions of said first layer, thereby exposing at least one portion of said first layer; and

placing a plurality of layers of said second material on top of said third layer, effective to form a multi-layer circuit board having an aperture which extends through said formed circuit board and which terminates upon said exposed at least one portion of said first layer.

(2) The method of claim 1 wherein said second material comprises electrically conductive material.

(3) The method of claim 2 wherein said second material comprises copper.

(4) The method of claim 3 wherein said central layer of material comprises aluminum.

(5) The method of claim 4 wherein said third material comprises a dielectric material.

(6) The method of claim 1 further comprising the step of forming a registration slot within said member.

(7) The method of claim 6 further comprising the step of forming a sighting window within each of said plurality of layers of said second material and within said layer of said third material.

5 (8) The method of claim 1 further comprising the step of selectively etching said central layer, effective to form at least one air-bridge.

(9) The method of claim 1 further comprising the step of placing solder within said aperture.

10 (10) The method of claim 1 further comprising the step of preventing said central layer from being resident within said aperture.

(11) A method for making a circuit board comprising the steps of:

15 providing a member having a central layer of a first material which is operatively positioned between top and bottom layers of a second material;

removing a portion of said first and said second layers, thereby exposing portions of said central layer  
20 of said first material;

providing a first layer of a dielectric material and placing said provided first layer of said dielectric material onto certain portions of said top layer, thereby overlaying said exposed portions of said central layer  
25 and creating first and second exposed portions of said top layer;

providing a third layer of said second material and placing said third layer onto said first layer of said dielectric material and over said first and second exposed portions of said top layer;

5 removing those portions of said third layer which overlay said first and said second exposed portions of said top layer;

providing a second layer of said dielectric material and placing said second layer of said dielectric material  
10 onto said third layer after those portions of said third layer which overlay said first and second exposed portions of said top layer have been removed;

providing a fourth layer of said second material and placing said fourth layer upon said second layer of said  
15 dielectric material and over said first and second exposed portions of said top layer; and

removing those portions of said fourth layer which overlay said first and said second exposed portions of said top layer, thereby creating an electrical circuit  
20 board having a first aperture which extends through said third and fourth layers of said second material and through said first and second layers of said dielectric material while terminating within said first layer of said second material, and a second aperture which extends  
25 through said third and fourth layers of said second material and through said first and second layers of said

dielectric material while terminating within said first layer of said second material.

(12) The method of claim 11 wherein said first material comprises aluminum.

5 (13) The method of claim 12 wherein said second material comprises copper.

(14) The method of claim 11 wherein said first aperture is electrically grounded.

10 (15) The method of claim 14 wherein said second aperture is isolated from electrical ground.

(16) The method of 11 further comprising the step of placing solder within said first and second apertures.

15 (17) The method of claim 11 further comprising the step of forming a diving board over at least one of said first and second apertures.

(18) A circuit assembly made by the process of:

20 providing a core member having a central layer of a first material which is operatively contained between a top and a bottom layer of electrically conductive material;

creating an registration slot within said core member;

25 placing dielectric material on certain portions of said top layer, thereby exposing a first and a second portion of said top layer and creating a pre-circuit assembly; and

using said created registration slot to selectively  
add layers of electrically conductive material to said  
pre-circuit assembly, thereby creating a circuit assembly  
having a first aperture which is formed through said  
5 created circuit assembly and which terminates within said  
first exposed portion and having a second aperture which  
is formed through said created circuit assembly and which  
terminates within said second exposed portion.

(19) The circuit assembly of claim 18 wherein an  
10 alignment slot is formed within each of said layers of  
electrically conductive material.

(20) The circuit assembly of claim 19 wherein solder is  
placed within each of said first and second apertures.

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